

April 25, 2003

TO: All Swimming Pool Installers/Maintenance

FROM: Gary L. Malmen
Electrical Bureau Chief

SUBJECT: SWIMMING POOLS/ SPAS/ HOT TUBS-REQUIREMENTS

It has recently been brought to the attention of the Division of Building Safety, Electrical Bureau that several swimming pools, spas, and hot tubs are being installed in violation of Idaho's electrical safety inspections and licensing laws.

Swimming pools, spas and hot tubs present special shock hazards to people due to mixing water enriched with chemicals, people and electricity together. Since there are special hazards, certain mandatory requirements are necessary for a safe electrical installation.

Idaho Code 54-1001 requires all installations of wires and equipment to convey electric current and installations of apparatus to be operated by such current within the state of Idaho to be in compliance to the safety requirements of the National Electrical Code (NEC).

The NEC, Article 680 governs the requirements for the construction and installation of electrical wiring for and equipment in or adjacent to all swimming, wading, therapeutic, and decorative pools, fountains, hot tubs, spas, and hydromassage bathtubs, whether permanently installed or storable, indoors or outdoors and to metallic auxiliary equipment, such as pumps, filters, and similar equipment.

One of the most important requirements of a safe installation is the bonding together of conductive portions of the pool and metal parts of electrical equipment associated with the pool. Bonding equalizes the potential (voltage) between various parts of the pool, thus, any shock hazard is greatly reduced. The Electrical Bureau requires an electrical permit and subsequent bonding inspection to ensure that all metal parts are connected together with a bare solid copper conductor, not smaller than No. 8AWG to form the common bonding grid. The bonding grid **connections** are required to be made by **exothermic welds or by listed pressure connectors or clamps.**

In addition, Idaho Code 54-1002 requires an electrical contractor and journeyman electrician license for the electrical installation of wiring and bonding in or on the above equipment. To be eligible to perform such electrical work pertaining to the bonding/grounding of swimming pools, individuals must be registered/licensed with the Division of Building Safety, Electrical Bureau.

Please be advised, in the interest of preserving life safety and per the laws and administrative rules of the state of Idaho, **the Electrical Bureau will require strict compliance to the Bureau's observation/inspection and approval of the bonding grid of all swimming pools prior to pouring the concrete or gunite.** To avoid additional construction costs, delays, and civil penalties, make sure your pool installation has an electrical permit and has been inspected and approved by the Bureau before proceeding.

If you have questions regarding these or related issues, please feel free to contact me at (208) 332-7147.

Thank you for your cooperation.

Gary L. Malmen
Electrical Bureau Chief